Mr. Jon F. Jacquot
Pipeline Safety Engineer
Wyoming Public Service Commission
Supreme Court Building
Cheyenne, WY 82002

Dear Mr. Jacquot:

This is in response to your letter of December 16, 1974, concerning an interpretation of a part of a listed specification referred to in 49 CFR 192.163(e) as the National Electrical Code, ANSI Standard C1. Only the 1968 edition is listed under Appendix A acceptable.

The National Electrical Code is quite specific in its requirements for electrical wiring and equipment in hazardous locations. The requirements vary according to the degree of hazard existing which is classified as Class I, II, or III and these are subdivided into Division 1 or 2. Class I, Division 1 is the most hazardous and Class III, Division 2 is least hazardous. The condition in question is classified under Class I, Division 2, which is one step less hazardous than the most serious.

The following definition is taken from the National Electrical Code, ANSI-C1-1968.

> "Class I, Division 2. Locations:
>
> "(1) in which volatile flammable liquids or flammable gases are handled, processed or used, but un which the hazardous liquids, vapors or gases will normally be confined within closed containers or closed systems from which they can escape only in case of accidental rupture or breakdown of such containers or systems, or in case of abnormal operation of equipment,
>
> "(2) in which hazardous concentrations of gases or vapors are normally prevented by positive mechanical ventilation but which become hazardous through failure or abnormal operation of the ventilating equipment, or (emphasis added)
>
> "(3) which are adjacent to Class I, Division 1 locations, and to which hazardous concentrations of gases or vapors might occasionally be communicated unless such communication is prevented by adequate positive-pressure ventilation from a source of clean air, and effective safeguards against ventilation failure are provided."

> "This classification usually includes locations where volatile flammable liquids or flammable gases or vapors are used but which in the judgment of the authority having jurisdiction, would become hazardous only in case of an accident or of some unusual operating condition. The quantity of hazardous material that might escape in case of accident, the adequacy of ventilating equipment, the total area involved, and the record of the industry or business with respect to explosions or fires are all factors that should receive consideration in determining the classification and extent of each hazardous area."

You ask if at a compressor station, where certain conditions exist similar to those described in the definition above, that the electrical wiring and apparatus should be designed and installed in accordance with provisions of the Code covering Class I, Division 2 locations. It would be appropriate to do so if the conditions are as described in any one or more of the three parts of this definition.

You further ask what safeguards would the Office of Pipeline Safety (OPS) require to insure that a facility constructed in accordance with Class I, Division 2 specifications is adequate. The OPS considers that it is the operator's responsibility to assure compliance with the Federal regulations. We further consider that it is his responsibility to assure that any changes he may make in the installation does not result in a condition that would be less safe than these minimum requirements.

Thank you for your interest in pipeline safety.

Sincerely,

/signed/

Joseph C. Caldwell
Director
Office of Pipeline Safety

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Mr. Joseph C. Caldwell, Director
Office of Pipeline Safety
TES-30
Department of Transportation
Washington, D. C. 20590

Re: Interpretation of ANSI CI

Dear Mr. Caldwell:

I am writing you today concerning interpretation of the above referenced code concerning electrical wiring and apparatuses in compressor stations. As you may know, electrical apparatuses and wiring in occasions where hazardous concentrations of flammable gases or vapors exist continuously, intermittently, or periodically under normal operating and conditions, in which hazardous concentrations of gases or vapors may exist frequently because of repair or maintenance operations or because of leakage; or in which breakdown or faulty operation of equipment or processes which might release hazardous concentrations of flammable gases and vapors, might cause simultaneous failure of electrical equipment, wiring and apparatus is to be constructed and installed in accordance with provisions in the above referenced code covering class 1, Division 1 locations.

It is possible that if it can be shown that at any compressor station where flammable liquids or flammable gases handled, processed or used within closed containers or closed systems from which they can escape only in case of accidental errupture or breakdown of such containers or systems, or where hazardous concentrations of gases or vapors are normally prevented by positive mechanical ventilation but which might become hazardous through failure or abnormal operation of the ventilating equipment or in areas where the location is adjacent to a Class 1, Division 1 location, that the electrical wiring and apparatus be designed and installed in accordance with provisions in the above referenced code covering Class 1, Division 2 locations.

If the operator is allowed to construct in accordance with Class 1, Division 2 specifications, what safeguards would your office require be taken to insure that a classification of location in accordance with the above referenced code is adequate?

We will look forward to hearing from you concerning this matter. Thank you for your consideration.

Very truly yours,

Jon F. Jacquot

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Pipeline Safety Engineer